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The effects of the Department of Defense's Prime Vendor Program on Navy medical readiness

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THE EFFECTS OF THE DEPARTMENT OF DEFENSE'S PRIME VENDOR PROGRAM ON NAVY MEDICAL READINESS

by

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December, 1994

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Prior to the Prime Vendor Program, the Defense Logistics Agency's depot system had been the Navy Medical Department's primary source of medical supplies. As a result of the PVP, medical supplies are now obtained directly from Prime Vendors. This practice has led to a reduction in the medical inventories held at DLA depots. This thesis examines the effects that these reduced inventory levels have had on the Navy's ability to support contingency operations.

The author examines both the DLA depot system and the Prime Vendor system and includes examples of the usage of each during contingency operations. The primary conclusion of this thesis is that the reduced inventories caused by PVP do not have a negative affect on the Navy Medicine's ability to support contingency operations. Specific recommendations include Prime Vendors and Navy planners working together to determine contingency requirements and stock rotation as well as an overhaul of the Authorized Medical Allowance List system.

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ABSTRACT

Prior to the Prime Vendor Program, the Defense Logistics Agency's depot system had been the Navy Medical Department's primary source of medical supplies. As a result of the PVP, medical supplies are now obtained directly from Prime Vendors. This practice has led to a reduction in the medical inventories held at DLA depots. This thesis examines the effects that these reduced inventory levels have had on the Navy's ability to support contingency operations.

The author examines both the DLA depot system and the Prime Vendor system and includes examples of the usage of each during contingency operations. The primary conclusion of this thesis is that the reduced inventories caused by PVP do not have a negative affect on the Navy Medicine's ability to support contingency operations. Specific recommendations include Prime Vendors and Navy planners working together to determine contingency requirements and stock rotation as well as an overhaul of the Authorized Medical Allowance List system.

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I. INTRODUCTION

A. BACKGROUND

Navy Medicine has traditionally used the Defense Logistics Agencies (DLA) depot system to purchase consumable medical supplies (pharmaceutical and medical/surgical supplies). In order to provide this service, DLA has maintained a large on-hand inventory in their depot warehouses. The purposes of this inventory have been to provide supplies for Military Treatment Facilities (MTF) and to provide supplies for surge and sustainment of contingency operations. A surge is defined as the initial phase of an operation during which the supplies required are obtained by deploying units. Sustainment is the period during which replenishment of those initial supplies is necessitated due to consumption.

In December 1991, a Government Accounting Office (GAO) report criticized the Department of Defense's (DoD) high level of medical inventories as compared to commercial practices (GAO, Dec 1991). The GAO study specifically recommended that DoD should initiate practices similar to those used by civilian hospital such as Just-in-Time (JIT) inventory and prime vendor contracting. The findings of this GAO report stated that through these new practices DoD could realize significant cost savings while maintaining high quality health care.

In response to this GAO report DoD initiated the "Prime Vendor Program" (PVP). This program divides the nation into 22 geographic regions. Within each region, two "Prime Vendor" contracts are awarded: one for pharmaceutical supplies and the other for medical/surgical supplies. The Prime Vendors are the primary source of consumable medical supplies for each DoD MTF within a geographic region. The first of the Prime Vendor contracts was the pharmaceutical contract for the National

Capitol area awarded in January 1993. Since then, all of the pharmaceutical and most of the medical/surgical supply contracts have been awarded. The final medical/surgical contract is scheduled to be awarded in February 1995.

The goal of the Prime Vendor Program was to reduce MTF's overall delivery cost of brand name medical supplies. This goal could be achieved through reductions in inventory levels, reductions in loss due to expiration, reductions in labor and increased use of electronic automation to expedite order processing. Inventory levels have decreased due to the Prime Vendors' ability to deliver supplies within twenty-four hours of order placement. Since inventory turnover has increased, supplies are not "on the shelf" as long, therefore, loss due to expiration has decreased. Labor has been reduced because less warehouse personnel are needed to manage the minimal stock on-hand. Lastly, orders are sent from the MTF to the Prime Vendor and billing data is transferred to Defense Personnel Support Center (DPSC) via modem so that the entire order placement, billing and payment are accomplished through a paperless electronic method.

The Prime Vendor Program has been successful in reducing the excessive DoD medical inventory stockpiles. Through the PVP, significant savings have been realized, but the ability of the Prime Vendors to provide the supplies needed for contingency operations has not been fully addressed.

B. PROBLEM STATEMENT

The purpose of this thesis is to determine the effects the Prime Vendor Program has had on the Navy's medical readiness. Specifically, the following primary research question is proposed: **What effect has the reduction in inventory levels caused by the Prime Vendor Program had on Navy Medicine's ability to support the surge and sustainment of contingency operations?**

The following secondary questions are considered in addressing the primary research question:

1. In an operational contingency deployment, can Prime Vendors meet the surge requirements to assure that Navy Medical units can deploy on time?

2. What strategy should Navy Medicine employ to assure that medical readiness is maintained in the Prime Vendor environment of decreased medical inventories?

3. What role should the Industrial Preparedness Program (IPP), Shelf-Life Extension Program and D-Day Significant Items List play in determining to what extent Prime Vendors should be relied upon to provide surge and sustainment supplies?

4. How can the Authorized Medical Allowance Lists' (AMAL) be improved to more effectively support contingency operations in the environment of evolving military missions?

The logistics problem involved in this thesis is a determination of the ability of the Prime Vendors' to meet a changing demand pattern. Under normal operating conditions (peacetime operations), the Prime Vendors have shown they are capable of meeting the requirements of their contracts and in some cases exceed those requirements (Wade, September 1994). This capability is the result of these Prime Vendors adapting to the demands of each MTF within their region. The central problem is can these Prime Vendors meet the change from a peacetime demand pattern to an operational contingency demand pattern (war/conflict scenario). Secondary to this problem is the question of safety stock. If the Prime Vendors are unable to meet the wartime scenario demand pattern, the difference between this demand and what the Prime Vendors can provide is the safety stock required to maintain medical readiness.

C. SCOPE AND LIMITATIONS

The Prime Vendor Program has been implemented for all Defense Department Medical activities, yet the focus of this thesis is on Navy medical readiness. The differences in the missions of the various services precludes including the uniqueness of each service in this study. The Army and Air Force Medical missions warrant a study of how this inventory reduction has effected their readiness. However, due to time constraints, this study will only analyze this problem from a Navy perspective.

Also the Prime Vendor Program is a vast program which is in its initial phase. This fact limits this study to only the pharmaceutical aspects of the PVP. All of the regional pharmaceutical Prime Vendor contracts have been awarded, therefore, the data necessary for this analysis is available. In contrast some of the medical/surgical supply contracts have just been awarded in the past few months while others have yet to be awarded. The medical/surgical supply portion of this program as well as the Army and Air Force perspectives hold great potential for additional research.

D. METHODOLOGY

This thesis examines the Department of Defense's Prime Vendor Program as administered by the Defense Logistics Agency's Defense Personnel Support Center. The results of this thesis will illustrate the steps necessary to assure medical readiness is maintained despite the reduction of on-hand medical inventory.

The majority of the information contained in this thesis was provided by library research, comprehensive reviews of the literature and policies, and interviews with personnel from Navy Medical Logistics Command (NMLC), Defense Medical Standardization Board (DMSB), and the Joint Medical Logistics Functional Development Center (JMLFDC) all at Ft. Detrick Maryland as well as Defense Personnel Support Center (DPSC) in

Philadelphia Pennsylvania. Information obtained from these sources is utilized to make recommendations on a course of action through which the Prime Vendor Program can best support contingency operations.

E. CONTENTS OF THESIS

Chapter II contains a review of the Prime Vendor Program, an explanation of how the Prime Vendor Program works along with a comparison of how this system worked before implementation of the Prime Vendor Program.

Chapter III is a discussion of the medical readiness environment in which the Prime Vendor Program is being called upon to operate. Included in Chapter III is the example of the USNS COMFORT's (T-AH 20) use of a Prime Vendor in support of Operation Uphold Democracy in Haiti.

Chapter IV discusses the Prime Vendor's ability to meet the changing demand patterns caused by the surge of a contingency operation. Included in Chapter IV is a section highlighting the views and concerns of the Prime Vendors.

Chapter V contains conclusions and recommendations.

II. PRIME VENDOR OVERVIEW

Prior to pharmaceutical Prime Vendor contracts being awarded the Defense Personnel Support Center had to determine the specifications for these contracts. DPSC was also required to get the cooperation of the pharmaceutical manufacturing industry. This cooperation was necessary so that the selected regional Prime Vendor could distribute the products of the pharmaceutical manufacturers.

A. DISTRIBUTION AND PRICING AGREEMENTS

Initially, agreements between DPSC-Medical and pharmaceutical manufacturers had to be negotiated. These agreements, called Distribution and Pricing Agreements (DAPAs), were necessary to allow Prime Vendors to distribute the products of these manufacturers. The DAPAs also set the ceiling price that Prime Vendors could charge for these products.

The Prime Vendor can only provide products for which DAPAs have been negotiated. Due to this fact, manufacturers are encouraged to have all of their commercial products listed in the negotiated DAPA. A DAPA is structured to allow flexibility so that commercial products can be added or deleted based on the wishes of the manufacturer and/or DPSC-Medical. Prices listed in the DAPAs must be certified in accordance with the Federal Acquisition Regulations (FAR) section 13.106 , which is the "price reasonableness test" (FAR, Apr 1985). Once the DAPAs were in place the next step in the process was to select the regional Prime Vendors. This was done through a competitive bid process in which DPSC-Medical was the contracting authority.

B. PRIME VENDOR CONTRACT

A Prime Vendor contract is a "modified requirements contract" as defined by the FAR section 16.503 (FAR, Apr 1985). This contract is "used to meet all actual purchase requirements for covered items at medical treatment facilities" (Walters, May 1993). The MTFs which are covered by a regional Prime Vendor are obligated to use that Prime Vendor to purchase any item included in a DAPA. The regional pharmaceutical Prime Vendor is a mandatory source of pharmaceutical supplies with the following exceptions:

- If the item is available from a DoD depot warehouse at a lower price.
- If the item is carried by DPSC medical electronic commerce program which provides direct delivery from the manufacturer.
- If the item is available from a mandatory source such as Federal Prisoner Industries (FPI) or National Institute for the Blind (NIB).
- If the Prime Vendor cannot meet the requirement within the 24-hour delivery period due to an item being out of stock or due to a manufacturer's back order.

Each Prime Vendor must meet the service requirements as set forth in the contract. First, the Prime Vendor must meet the minimum fill rate of 95 percent of the line items ordered. While this is the minimum it is expected that 97 to 98 percent should be the typical fill rate percentage. Second, each order should be filled and delivered within twenty-four hours of ordering and delivery should be provided six days per week. Third, the Prime Vendor should be able to deliver to at least two and up to fifteen sites (MTFs). Fourth, the status as to whether an item is out of stock or not should be available to the ordering activity within two hours. It is expected that the status will typically be available within 20 minutes. This requirement allows the ordering activity the flexibility to obtain an item from other sources if the need arises.

Finally, an additional requirement is included in the contract which states that the Prime Vendor must be able to deliver within six hours two emergency orders per month. (Tackitt, September 1992)

C. PRIME VENDOR PROCESS

After the DAPAs have been negotiated and the regional Prime Vendor is selected, the military treatment facilities in that region are obligated to obtain their supplies from that Prime Vendor. All of the items which have a DAPA are now listed in a DAPA computer catalog, which lists the products from various manufacturers and the prices of those products. This catalog is an electronic link between the Prime Vendor, the MTFs and the DAPA holders (the manufacturers and DPSC). Access is provided through a Personal Computer (PC) via a modem hook-up. The hardware and software support are to be provided by the selected Prime Vendor.

The typical Prime Vendor ordering sequence begins with the MTF determining what they need to order. The DAPA computer catalog information is used to order the requested items. At this point in the order process the ordering activity has the ability to see if the item they need is available and also if that item is available from different manufacturers at different prices. [An example of this could be that various companies make 325 milligram aspirin tablets in 1000 tablets bottles. If the MTF needed to order a quantity of this item they have the ability to choose the manufacturer who offers this item at the best price (assuming the quality of these products is comparable).] Once the appropriate items are chosen the order is then placed via Electronic Data Interchange (EDI) to both the Prime Vendor and payment activity, DPSC.

The order is received and processed by the Prime Vendor who then electronically (via EDI) sends an acknowledgement to the MTF. The Prime Vendor also sends an invoice

electronically (via EDI) to the payment activity, DPSC. The Prime Vendor delivers the order within twenty-four hours to the appropriate department at the MTF which then checks the order for accuracy and completeness. The MTF then notifies DPSC that the order has been received so that DPSC can issue payment to the Prime Vendor via an Electronic Fund Transfer (EFT). This final step completes a paperless transaction in which DoD received required supplies and the vendor received the appropriate payment.

D. MEDICAL SUPPLY BEFORE PRIME VENDOR PROGRAM

The supply system used by Navy Medicine prior to the Prime Vendor Program was characterized by high inventory levels and slow response times. The primary source of supplies was the Defense Logistics Agency's Defense Personnel Support Center Depots. The process differs greatly from the Prime Vendor method described above. The Department of the Navy (DON) uses a prioritized system when ordering supplies from these depots known as Uniform Material Movement and Issue Priority System (UMMIPS). The intent of this system is to provide rapid turnaround time for supplies which are urgently needed while allowing for a longer turnaround time when ordering routinely stocked items.

There are three different priorities which can be assigned when an MTF places an order during peacetime. The highest priority is called a "Priority 3" order, which meant that the supplies should have a turnaround time of five days. The middle priority is called "Priority 6" with a turnaround time of twelve days. The lowest priority is called "Priority 13" with a turnaround time of 31 days. In reality the time that it took from order to receipt by the MTF was usually longer than these intended turnaround times. While "Priority 3" was usually around seven days, "Priority 6" could be as long as a month with "Priority 13" anywhere from 60 to 90 days.

Due in part to this slow turnaround time large inventories were kept at the MTF or in MTF warehouses. As a general rule of thumb a two week to one month supply was stocked in the pharmacy department with an additional three to six months supply maintained in an MTF warehouse. This "safety stock" was part of the reason for the original criticism in the GAO report from December 1991.

In addition to maintaining large inventories under this system, once an order was submitted the status of an order was not readily available to the department which had placed the order. The status of all orders was available only through the MTF supply department, therefore access to the status of a pharmacy department order was not available in the pharmacy. This resulted in the pharmacy waiting for an order to be delivered to determine which requested items had been supplied by the depot. The next step in the process was to then find an alternative source for the items which had not been supplied.

The secondary source of supplies was to purchase the required supplies from a commercial source, this process is frequently referred to as an open purchase. This alternative source could be either a wholesaler or directly from the manufacturer. The open purchase procurement was usually used in two circumstances. The first, as mentioned above, was if the item was back ordered from the depot. The second reason was if the depot did not routinely stock the item which the MTF needed. The procedure required to get this procurement approved was complicated involving many layers of paperwork and screening to assure that the government paid a fair price in accordance with the FAR.

The items which are available through the DLA depot system are listed on the Federal Supply Schedule (FSS). The price of these items had been negotiated through the competitive bid process so that the government pays the best

price available. While these prices were significantly cheaper than open purchase, DLA added a surcharge to each order. The surcharge, which was adjusted each year, typically was about 20% of the total purchase order. The purpose of the surcharge was to cover DLA's cost of providing this service.

Prior to the implementation of the Prime Vendor Program many problems existed in the medical supply system used by Navy Medicine. Primarily, the problem was obtaining the necessary supplies in a timely manner at a reasonable price. While the intent of the Prime Vendor Program was not to correct all the problems inherent to this system, it has begun to improve the process.

E. BENEFITS OF THE PRIME VENDOR PROGRAM

The benefits derived from the implementation of the Prime Vendor Program have addressed many of the problems highlighted in the previous section.

1. Turnaround Time

The most apparent benefit has been the reduction in turnaround time when an MTF places an order. Under the depot system, the window for receiving an order could vary from five days to three months. The Prime Vendor contracts requires a twenty-four hour turnaround for routine items with the potential of a six hour turnaround for emergencies. As a result of this decreased turnaround time a realistic Just-in-Time inventory system is now feasible at DoD MTFs.

2. Reduction in Waste

In using this JIT system MTFs are able to realize savings for a variety of reasons. Since large inventories are no longer required, the problem of waste due to expiration is greatly reduced. The practice of keeping a three or six months supply of a medication in the pharmacy and/or MTF warehouse was commonplace. If for some clinical reason the medical staff changed their prescribing practice so that a medication was no longer used at the same rate, that

medication would eventually expire and have to be destroyed. With the Prime Vendor's twenty-four hour turnaround these large inventories are not required. While there will still be some expiration of supplies, the quantity of expired medical supplies has decreased, both because the quantity of medical supplies on-hand has decreased and the turnover of supplies has increased.

3. Inventory Savings

Another common practice was that as supplies from the MTF warehouses were issued to the MTF, they were replenished through the depot system. Since this warehouse backup is unnecessary in the JIT environment of Prime Vendor, a one time inventory saving is realized when the MTFs do not replace the depleted stock. The results of a study, completed by Vector Research, Incorporated (VRI) and Electronic Data Systems Corporation (EDS), calculates these one time savings of $9.9 million for the fourteen test sites observed. This study through regression analysis also extrapolated these savings for all DoD Continental United States (CONUS) MTFs. The result of this extrapolation is an estimated savings of $23.9 million for the other 97 CONUS MTFs. Using a 95% confidence level this estimate could range from $17.3 million to $30.7 million. (Prime Vendor Evaluation, June 1994)

4. Cost of Prime Vendor Contract

In financial terms, the cost of the pharmaceutical Prime Vendor contract can go as high as 1.5% of the sales for a regional Prime Vendor (Tackitt, October 1992). This charge is significantly less than the approximately 20% surcharge which DLA was charging for depot items. Furthermore, another surcharge of 7% from the MTF warehouse charged to the pharmacy department for stocking medications is eliminated when using the Prime Vendor instead of the MTF warehouse. The low charge and the negotiated DAPAs combine to make the Prime Vendor Program a more cost effective method of procuring

pharmaceutical supplies for those item available through Prime Vendors.

5. Labor Reductions

Money is also saved through reductions in required labor. Since less inventory is maintained in MTF warehouses less personnel are required to staff the warehouses. Also, clerical personnel can be reduced because bills are paid centrally by DPSC and the workload from open purchases orders has decreased.

6. Customer Support

The customer support portion of the Prime Vendor Program objective is accomplished by increasing the services and service levels to MTFs. The specifications in the Prime Vendor contracts are all improvements in customer support over the depot system. The 95% minimum fill rate is an improvement over the goal of 85% fill rate for depot orders especially considering that the 85% goal was often not achieved. The twenty-four hour turnaround time, as discussed previously, is vastly superior to even the highest peacetime priority of UMMIPS. Emergency deliveries and order status were not readily available through the depot system.

The goal of the Prime Vendor Program was to reduce the costs of medical supplies while improving customer support. Even though the program is still in the initial phases it is well on the way to fulfilling that goal. Customer service has definitely improved and "costs are between 15 and 16 percent less than costs of the same supplies bought in bulk and distributed from government warehouses" (Bird, 1993). With this initial success the question now turns to how this program impacts other aspects of the mission of Navy Medicine.

F. PREVIEW OF NEXT CHAPTER

The next chapter discusses the medical readiness issues which are pertinent to contingency operations. The context for these contingency operations is the two nearly simultaneous major regional conflicts (MRC) outlined in the Bottom-Up Review (Bottom-Up Review, September 1993). The chapter begins with a definition of medical readiness in order to provide the reader with the necessary framework for the rest of the chapter. With that framework established, the next step is an explanation of the echelons of medical care in a conflict. The rest of the chapter explains and discusses contingency operations and how the Prime Vendor process can be adapted to support the surge and sustainment of these operations.

III. MEDICAL READINESS ISSUES

The Department of Defense's definition of medical readiness is that

> Medical Readiness encompasses the ability to mobilize, deploy and sustain field medical services and support for any operation requiring military services; to maintain and project the continuum of healthcare resources required to provide for the health of the force; and to operate in conjunction with beneficiary healthcare. (MRSP-2001, August 1994)

The initial portion of this definition (mobilization, deployment and sustainment) is where this thesis is focused. The remainder of this definition (day-to-day military medical practice) is the environment where the Prime Vendor Program is operating on a routine basis.

A. NAVY WARTIME MEDICAL CARE STRUCTURE

During a conflict, the Navy's medical assets for combat casualty care are organized into levels or echelons. These levels flow from the battlesite within the theater of operations back to the continental United States (CONUS). The theater of operations is divided into two zones, the Combat Zone and the Communications Zone.

The Combat Zone is defined as the area which is required to conduct combat operations; this includes all sea, land and airspace within that area. Echelons I, II and III fall within the Combat Zone.

The Communications Zone is defined as the area behind the Combat Zone which is required to support combat operations. Echelon IV is in the Communications Zone while Echelon V, the final level, is in CONUS.

The echelon system is characterized by decreasing mobility with increasing capabilities as patients flow from Echelon I through Echelon V.

1. Echelon I

Echelon I is where initial emergency care is administered and patients are prepared for MEDical EVACuation (MEDEVAC). This initial care is provided by a Navy Hospital Corpsman assigned to a Marine Corps unit or to a ship's medical department. Echelon I also includes Marine Corps Battalion Aid Stations (BAS) and Shipboard Medical Aid Stations (MAS), which is the patient's initial contact with a physician. The BAS or MAS is located close to the "front line" but in a "safer" area. This allows a physician to determine the appropriate care for these patients and whether or not MEDEVAC is required. Echelon I is the most mobile component of the echelon system.

2. Echelon II

Echelon II is where advanced emergency care including resuscitation and emergency surgery can be performed by medical teams consisting of surgeons, nurses and medical technicians. Also further assessment for MEDEVAC occurs at Echelon II. In the Marine Corps environment, Echelon II consists of Collecting and Clearing Companies and Surgical Support Companies. In a shipboard environment, these tasks are coordinated by a shipboard surgeon. The final Echelon II activity is Casualty Receiving and Treatment Ships (CRTS), which is the secondary role of amphibious ships that have deployed their complement of troops ashore. Echelon II assets are less mobile but more capable than Echelon I.

3. Echelon III

Echelon III consist primarily of two valuable medical assets, Hospital Ships (T-AH) and Combat Zone Fleet Hospitals. Hospital Ships are 1,000 bed afloat surgical hospitals. Currently, there are two T-AH's in the U.S. Navy inventory, USNS MERCY (T-AH 19) with a homeport in Oakland, California, and USNS Comfort (T-AH 20) with a homeport in Baltimore, Maryland. Combat Zone Fleet Hospitals are prepositioned around the world in order to be readily deployable. These

hospitals are modular units which can be assembled in a minimal amount of time, usually in close proximity to Marine Corps units ashore. The Combat Zone Fleet Hospitals are configured in 2 sizes, a 250 bed and a 500 bed hospital. Both of these facilities can perform complicated surgical procedures as well as provide acute medical care. These assets in Echelon III provide highly skilled specialty definitive care in order to return their patients to full duty as quickly as possible.

4. Echelon IV

Echelon IV is comprised of outside the continental United States (OCONUS) MTF's and a Communications Zone Fleet Hospital. These facilities are capable of definitive subspecialty rehabilitative care in order to return patients to duty or prepare them for further MEDEVAC to CONUS MTF's.

5. Echelon V

The final level of care consists of CONUS MTF's as well as Veterans Administration (VA) hospitals and civilian hospitals. These facilities are used when patients require extensive rehabilatory treatment.

Each of these echelons can provide capabilities equal to the preceding level, plus additional capabilities, for incrementally progressive care. In general, the more sophisticated the medical unit, the less mobile that unit will be. The goal of this echelon system is to treat combat casualties at the lowest echelon possible and return them to duty within a predetermined time frame. If this is not possible patients are MEDEVACed to a higher echelon. (GAO, July 1993)

B. AUTHORIZED MEDICAL ALLOWANCE LIST (AMAL)

A medical requirements list is established for each Navy or Marine Corps unit which may deploy during either a contingency operation or normal (day-to-day) operations. These units encompass various Navy and Marine Corps assets

such as Marine Medical Logistics Companies, combatant ships, Fleet Hospitals and Hospital Ships, to name a few. These lists, called Authorized Medical Allowance Lists (AMAL), are the authorized allowance of medical equipment and consumable supplies which are required to accomplish the medical mission of the unit. An AMAL is determined based on the mission and capacity of the medical assets in the unit. For example, an AMAL for the Hospital Ships is a complete list of the medications needed to support 1000 casualties for 30 days. This list is based on a combat casualty care mission which is trauma/surgery intensive.

The process by which these AMALs are produced involves the cooperation of various communities within the Navy Medical Department. In order to decide which items will be included in an AMAL an ad-hoc committee is convened. This committee includes experts from the various physician communities (surgery, orthopedics, etc.), nursing specialties (intensive care, general nursing, etc.), ancillary services (pharmacy, laboratory, etc.) and administrative communities (supply/logistics, financial management, etc.). The members of this committee work together to produce a list which balances clinical requirements with the monetary and logistical constraints of the mission.

An AMAL ad-hoc committee is reconvened every two years to review the contents of the AMALs. This process is undertaken to assure that the AMALs are updated to meet the ever changing practice of medicine. Between reviews, changes can be made to an AMAL by completing and submitting an AMAL change request form (ACR). The goal of this review is that the standard of care practiced by deployed units (Hospital Ships, Fleet Hospitals, etc.) should not be dramatically different than that practiced at CONUS MTFs.

C. AMAL FLEXIBILITY

While the AMAL concept is a useful planning tool there is some criticism that it is an inflexible, outdated system (Brouker, October 1994). The concept for AMALs was based on preparing to fight the Cold War. The AMAL was designed to support a large scale war against Soviet forces. The reality of the post-Cold War military environment requires the flexibility to engage in diverse operations. Not all of these operations are wartime or combat situations in the traditional sense. Since the end of the Cold War, the U.S. military has been called on for humanitarian relief as well as for peacekeeping operations in various places around the world. The AMALs currently employed by Navy Medicine are designed primarily for a combat casualty care mission. Specifically, these AMALs are geared toward a trauma/surgery patient population. Humanitarian and peacekeeping operations, by their nature, are not as trauma/surgery intensive as combat operations. The medical focus for peacekeeping operations is essentially a primary care mission (sick call, acute care illnesses, etc.) with a lesser emphasis on trauma/casualty care. In humanitarian relief operations, the problems involve basic health problems (disease, malnutrition, etc.) as opposed to the casualties of combat.

In some operations, the focus can change from a combat operation to a peacekeeping or humanitarian mission quite rapidly. Operation Uphold Democracy is a vivid illustration of this type of evolving mission. While U.S. forces were poised to invade Haiti in order to restore the democratically elected government, a transfer of power was negotiated so that a hostile invasion was no longer required. Once the U.S. troops came ashore in Haiti the invasion force was transformed into a peacekeeping force. In this situation, the trauma/surgery intensive AMAL used by the USNS COMFORT lacked the types of supplies and medications as needed for this newly defined mission.

Also, U.S. forces operate around the globe in regions involving differing weather conditions and geographic characteristics. The "one AMAL" concept utilizes the same AMAL for all contingency operations. In other words, whether a medical unit is deployed for a contingency operation to a desert plain, a tropical island or a wintery mountainous region, the same AMAL is used for that unit. While similar combat casualties may occur in each of these scenarios, the Disease and Non-Battle Injuries (DNBI) would be vastly different.

As explained in the next section, the potential MRCs described in the Department of Defense's Bottom-Up Review exemplify these differences. One possible MRC is a conflict against either Iran or Iraq in the Persian gulf region (a desert environment). While the other MRC on the Korean peninsula exhibits the seasonal ranges from oppressive hot summers to bone chilling cold winters.

Another criticism of the AMAL system is that an AMAL is outdated by the time it is published. The time lag between submission and approval of an ACR cause the AMAL to be a less than state-of-the-art requirements list. This type of problem is the result of the rapidly changing environment of health care practice, especially with regard to the development of new medications and new uses for existing medications.

Planning for a conflict involves anticipating many variables. These variables include the mission type (peacekeeping, humanitarian, armed conflict, etc.), geographic location (desert, tropical, etc.) and the potential mission change (invasion to peacekeeping or humanitarian) of any contingency operation. The "one AMAL" concept restricts the ability of medical planners to anticipate these variables.

D. CONTINGENCY OPERATIONS

On September 1, 1993 Secretary of Defense Les Aspin released "THE BOTTOM-UP REVIEW: Forces For A New Era." One of the purposes of this report was to reexamine the United States defense strategy in the post-Cold War era. During the Cold War, military planning was focused on fighting Soviet Union forces around the globe. With the fall of the Soviet empire in the late 1980's this focus has shifted to protecting U.S. interests around the world and defeating regional powers which threaten these interests. The stated goal of the Bottom-Up Review is that U.S. military forces be able to win two nearly simultaneous Major Regional Conflicts (MRC). An MRC is assumed to be similar in size to Operation Desert Shield/Storm (ODS). (Bottom-Up Review, September 1993)

The primary mission of the Navy Medical Department is to support Fleet operations, that is to provide the necessary medical support for both day-to-day operational missions and contingency operations. Since ODS, these contingency operations have included Operation Provide Comfort in Northern Iraqi (Kurdish Refugees), Operation Restore Hope in Somalia, Operation Provide Promise (humanitarian relief efforts in Bosnia), Operation Uphold Democracy in Haiti as well as humanitarian relief efforts for Cuban and Haitian refugees at Guantanamo Bay, Cuba. Due to a decrease in medical inventories held in the DLA depot system, Navy Medicine must now rely on the Prime Vendor Program to procure the medical supplies required for these contingency operations.

In the broad picture of the echelon system, it is planned that Echelons I and II activities will eventually transition into prime vendor contracting for medical supplies. Currently, the details of these plans have not been finalized. Echelons IV and V (CONUS and OCONUS MTF's) are currently functioning within the PVP. The current supply system of these facilities would have little or minimal changes during a contingency operation. Echelon III assets, Hospital Ships (T-AH) and

Fleet Hospital units, are either on-line with a Prime Vendor or soon will be on-line. For example, the USNS COMFORT (T-AH 20) utilized her Prime Vendor when activated for Operation Uphold Democracy off the coast of Haiti (June-October 1994).

E. OPERATION DESERT SHIELD/STORM (ODS)

1. Purpose

In response to the August 1990 Iraqi invasion of Kuwait the U.S. military initiated its largest operation since the Vietnam War era. The goals of this operation (Operation Desert Shield/Storm) was, in accordance with United Nations resolutions, to expel Iraq from Kuwait. In cooperation with more than thirty allied nations the U.S. deployed Army, Marine Corps and Air Force units into Saudi Arabia as well as Navy ships to the Persian Gulf, Indian Ocean and Red Sea. This positioning provided defenses against an Iraqi invasion into Saudi Arabia as well as a jump off point for the allied attack against Iraqi forces in Kuwait and southern Iraq.

2. Medical Support Mission

In support of this operation, the Navy deployed nearly 12,000 medical personnel. Almost 8000 of these personnel were assigned to Echelons II and III units including the two Hospital Ships (USNS MERCY and USNS COMFORT), three Combat Zone Fleet Hospitals, three Marine Corps medical battalions and seven Casualty Receiving and Treatment Ships (CRTS) (GAO, July 1993).

Operation Desert Shield/Storm occurred prior to DoD's initiation of the Prime Vendor Program. The medical supply system used during ODS was the same cumbersome system routinely used by CONUS MTFs. Medical supplies were obtained from the inventories maintained through the DLA depot system. The UMMIPS system changed to its wartime priorities to lessen turnaround time yet improvements were not observed. The problem was a result of medical supply orders competing with supply orders from combat units as well as other support units

in the UMMIPS system. These orders include items necessary to sustain units in the field such as fuel, ammunition, spare parts, food, etc.

3. Military Results

Operation Desert Shield/Storm was a resounding military success. The U.S. and coalition forces were successful in expelling Iraq from Kuwait and restoring the legitimate Kuwaiti government to power. The alliance maintained control of both airspace and sea lanes allowing the ground forces to rapidly defeat Iraqi forces in both southern Iraq and Kuwait. The ground portion of the war was completed in approximately 100 hours. Also, casualties were amazingly low for U.S. forces who were involved in the vast majority of the fighting.

4. Problems Encountered By Medical Support

However, the medical support mission was not as successful as the overall campaign. Problems existed with the supply of medical consumables, specifically intravenous fluids, pharmaceuticals and other dated sterile items. Many in theater units reported that these items had arrived either expired, near expiration, or did not arrive at all. According to a July 1993 GAO report, Navy supply officials stated that these supplies had been "allowed to expire to avoid the expense of continually replacing them during peacetime." The intention was to deliver in-date items to the units at their deployment sites in the event of an operation like ODS. This problem was compounded by the fact that personnel from these units were unaware of these plans, therefore high priority requisitions were issued to replace the expired stock further burdening the logistics system. (GAO, July 1993)

Another aspect of these problems was the lack of confidence in the supply system exhibited by many of the clinicians (physicians, nurses, etc.) deployed with these medical units. These feeling were due, in part, to past experiences at CONUS MTFs, the problem of expired items

explained above, and antiquated equipment/supplies issued with AMALs. As a result, some clinicians made personal requests to CONUS MTFs and stateside private practices to send supplies directly to them, bypassing the official supply system. (This practice was initiated when deployed personnel realized they were receiving personal mail/packages from home via express carriers (Federal Express, UPS, etc.) faster than requisitioned supplies were being delivered to their unit.) (Geiger, November 1994)

In an attempt to streamline in-theater resupply the Army was designated the Single Item Manager (SIM) for medical supplies in November 1990. The purpose of the SIM was to manage medical resupply for all the military services. While the SIM concept was sound, the operations proved otherwise for Navy units. The Navy supply system was incompatible with the Army system used by SIM. This fact led to an increase in both order and shipping times. Also, due to the operational uniqueness of the Hospital Ships many of the items they required were unavailable through the Army supply system.

Inconsistency was another weakness involved in the medical supply system. Orders varied widely with regard to percentage of order filled, turnaround time and accuracy. As an example of this, both Hospital Ships initiated similar orders upon receiving their activation orders. While the USNS COMFORT received 85% of her order in ten days, the fill rate for the USNS MERCY was 28% in the same time period. (Howell, October 1994)

5. Other Medical Factors

Fortunately, there were other factors which lessened the impact these weaknesses had on the overall medical mission during Operation Desert Shield/Storm. The three most important factors were: length of time before hostilities commenced, low casualty rates and the resourcefulness of medical personnel in-theater. Without the combination of

these factors, medical units may not have been able to fulfill their missions.

a. Timelag Before Hostilities

The time lag from Iraqi invasion until the initiation of the allied air attack on Baghdad and fortified Iraqi defensive positions was approximately six months. Iraq invaded Kuwait in August 1990. The allied air campaign began on January 15, 1991 with the ground attack following in February 1991. This six to seven month period before the initiation of combat allowed medical units time to work out many medical supply deficiencies.

b. Low Casualty Rate

Prior to the conflict the anticipated casualty rates were estimated as 10,000 Americans Killed In Action (KIA) and 20,000 Wounded In Action (WIA). Fortunately, the actual KIA/WIA figures were much lower with 124 Americans KIA and 1500 WIA.

c. Medical Personnel

While the medical supply system had some deficiencies, the in-theater medical personnel overcame many of these problems. In some cases supplies were obtained through other than normal channels such as via express carriers as noted above. Also, there was bartering and "borrowing" between medical units (including OCONUS MTFs in Europe) to assure that as many units as possible were able to fulfill their missions. As a result of this "resourcefulness" most, if not all, medical units in-theater were ready and able to receive and treat casualties once hostilities commenced.

Such personal initiative helped prevent a failure of the medical support mission for Operation Desert Shield/Storm. While these efforts were laudatory they cannot be relied upon in planning for future conflicts. In the future, it is unlikely that the number of casualties will be as small as in Operation Desert Shield/Storm or that a six month period would

be available to build up the required supplies. Instead of relying on these unpredictable factors, improvements in the medical material supply system are required.

F. OPERATION UPHOLD DEMOCRACY (OUD)

The first use of the prime vendor concept for a contingency operation occurred during Operation Uphold Democracy in 1994. OUD was the U.S. mission to restore to power the democratically elected government of Haiti, which had been removed by a Haitian military coup in 1991. The plans of this mission called for a U.S. invasion of Haiti in order to defeat the Haitian military and eventually remove the ruling military leadership. Once these tasks were accomplished the exiled government returned to Haiti to assume power.

The use of a Prime Vendor in this mission occurred when the USNS COMFORT (T-AH 20) was activated to support OUD. The mission of the COMFORT was to serve as the primary casualty receiving ship for the planned invasion. Upon activation in May 1994, the COMFORT had not been included in any of the Prime Vendor contracts which had already been awarded. Through the hard work of the Naval Medical Logistics Command and Defense Personnel Support Center, the Comfort was attached to the Tidewater (VA) region Prime Vendor contract before she deployed. If the COMFORT's initial order had been placed as an open purchase it would have cost $33,860. The same order from the same wholesaler actually cost $17,607 when placed one day later as part of the Tidewater Prime Vendor contract. By attaching the COMFORT to this Prime Vendor a 52% savings was realized on the purchase price of identical items. (Wade, September 1994)

The COMFORT was on-station from June 1994 until early October 1994. During this deployment, the COMFORT placed two additional orders through the Prime Vendor for medical supplies. A total of 250 different line-items were requested

in these orders. As a result of using a Prime Vendor, the COMFORT was able to obtain a better fill rate than through the DLA depot system as well as procure these medical supplies faster and cheaper. The fill rate for supplies ordered through the Prime Vendor for the COMFORT during OUD was 92%. Supplies, on average, were delivered in three days by the Prime Vendor as opposed to the typical delays experienced prior to PVP. Also, the savings for the supplies obtained through the Prime Vendor was 25% ($73,886 DAPA pricing vice $99,613 FSS cost). (OUD Brief, November 1994)

The planned invasion was averted when Haitian military leaders agreed to step down and allow the return of Jean-Bertrand Aristides' democratically elected government. U.S. forces entered Haiti unopposed to facilitate a peaceful transfer of power. Fortunately, as in ODS the expected casualties did not occur and the trauma/surgical services of the COMFORT were not needed.

In comparing the supply systems used to procure medical supplies during Operation Desert Shield/Storm and Operation Uphold Democracy, the prime vendor concept exhibits clear advantages over the depot system. Turnaround time is drastically reduced while costs have also been reduced. Due to the high fill rate and short turnaround time, the probability of having an item on-hand has increased. Also, waste due to expiration is virtually eliminated since inventories do not have to be maintained prior to deployment.

While Operation Uphold Democracy is an example of the successful use of prime vendor contracting to support contingency operations, it also illustrates the problems associated with the "one AMAL" concept. Due to the negotiated settlement, the mission had changed from a forced-entry amphibious invasion to a peacekeeping/humanitarian operation. The medical supplies aboard the USNS COMFORT were designed around a trauma/surgery mission. A peacekeeping-humanitarian

mission would most likely have a different type of patient population characterized by acute care problems and infectious diseases which are not planned for in a trauma/surgical AMAL.

G. PREVIEW OF NEXT CHAPTER

The military and economic advantages of the Prime Vendor Program have been demonstrated, however when supplies come from a non-military channel concern exists about that source's ability to respond to military needs in a conflict. Chapter IV examines the ability of the Prime Vendors to meet the changing demand pattern of a contingency operation. Also discussed in Chapter IV are other tools which the Department of Defense uses to assure readiness is maintained including the Industrial Preparedness Program, Shelf-Life Extension Program and the D-Day Significant Items List. Chapter IV delineates the Prime Vendor Program's strategy and tactics needed to maintain medical readiness to support contingency operations.

IV. PRIME VENDOR FOR CONTINGENCY OPERATIONS

Prior to DoD's Prime Vendor Program, medical readiness was an outgrowth of medical inventories maintained in the DLA depots. Navy medical units were able to support contingency operations by obtaining the appropriate medical supplies through the depot system. Because of the Prime Vendor Program, the ability of the Navy Medical Department to support these operations is now dependent on the Prime Vendors' ability to provide the necessary supplies.

A. PRIME VENDORS ABILITY TO MEET DEMAND

In all twenty-two CONUS geographic regions, the pharmaceutical Prime Vendor contracts have been on-line for a least six months. With each of these contracts, there has been a "learning curve" process. This learning curve takes place during the initial phase-up of these contracts usually in the first month or two. During this time, the Prime Vendors learn the medication demand patterns for each MTF within the region. By combining the demands of each MTF in the region, the Prime Vendor can determine a demand pattern for each medication. With this information, Prime Vendors can forecast the quantity of a medication they should plan to provide in the future. Since, Prime Vendors operate Just-in-Time inventory systems, the accuracy of these forecasts is vital to the Prime Vendor. Accurate forecasts enable the Prime Vendors to meet customer demands without tieing up capital in inventory.

Each pharmaceutical Prime Vendor contract requires a 95% minimum fill rate. However, some of the regional Prime Vendors have been unable to meet this requirement during the first month of their contract. After demand patterns have been established in the first month, each Prime Vendor has been able to meet and/or exceed a 95% fill rate.

The luxury of being able to learn and adapt to a demand pattern is not available during contingency operations. In a contingency operation, deploying units cannot wait until a Prime Vendor determines the operation's demands and is able to fulfill those requirements. Many units deploy during the initial five to ten days of an operation. During this time frame, the Prime Vendors must respond to meet the operational surge. If the Prime Vendors do not know the requirements for an operation, the potential of meeting the requirements is at best a hit or miss proposition.

B. INFORM PRIME VENDORS OF REQUIREMENTS

Since Prime Vendors operate on a Just-in-Time philosophy, similar to Navy MTFs, the probability is low that they will have the quantity of supplies required for an MRC. The Prime Vendors distribute supplies from pharmaceutical manufactures to MTFs as well as to various civilian institutions (hospitals, pharmacies, etc.). In order to maintain profitability, Prime Vendors hold minimal amounts of excess inventory above their forecast demands. Such small Prime Vendor safety stocks cannot be expected to meet the demands of an unanticipated contingency operation.

In the past this situation was not a concern because of the large inventory of medical supplies held in DLA depots. Now that the problem has arisen, a solution is required so deploying medical units can procure required medical supplies. By working with the Prime Vendors, this problem can be resolved.

The first step in the solution would be to inform the Prime Vendors of the medical material requirements for a contingency deployment. This information should be specific in terms of both line-items and quantities. While the line-items will be generally similar to peacetime MTF demands, the quantities will be significantly larger. The reasons for this difference are twofold. First, deploying units will order 30

to 60 day supply quantities. An MTF normally orders a week's supply or less since the MTF can reorder six days a week. The second reason is MTFs order based on a uniform expected patient load while a deploying unit's order is in anticipation of mass casualties. This situation will require Prime Vendors to maintain more "safety stock" to support contingency operations. In order for the Prime Vendors to prepare for deployment requirements, they must know what will be expected of them.

C. PRIME VENDOR STOCK ROTATION

Rotating stock is a common practice throughout the military as well as in various civilian businesses. In a situation in which dated materials are used, this procedure is necessary to assure materials are not wasted. By using a first-in, first-out stock rotation, the pharmaceuticals with the shortest expiration date are used first. Many of the pharmaceutical supplies required for contingency operations are the same supplies used during peacetime by CONUS MTFs. Therefore, it would be advantageous to both DoD and the Prime Vendors to enter into a contractual agreement through which Prime Vendors can rotate contingency supplies through normal peacetime MTF usage. Precedence for this type of contracting has already been established between DoD and individual pharmaceutical manufacturers.

An example of this type of contracting is an agreement between DoD and Marion Merrell Dow pharmaceutical company (MMD). MMD manufactures Silvadene topical cream, which is used for the treatment of moderate to severe burns. Since various types of burns frequently occur during combat, a large quantity is required by the military during wartime. While DoD MTFs use Silvadene cream in day-to-day operations, the large quantity needed for a war scenario would expire before being used in normal peacetime operations. The agreement calls for MMD to maintain a quantity sufficient for a war

scenario. This stock is never depleted; as it is purchased by customers, MMD replaces what has been purchased with newly manufactured batches of Silvadene cream. This agreement is advantageous to both DoD, which assures an available supply of a required medication, and MMD, who is able to meet their customer demands and still provide this service to DoD. Similar contractual agreements between DoD and Prime Vendors can provide similarly advantageous outcomes.

D. ADDITIONAL DOD PROGRAMS TO SUPPORT CONTINGENCY OPERATIONS

The Prime Vendor Program is one of many tools which military medical planners use in support of contingency operations. The other tools, if used in cooperation with the Prime Vendor Program, can enable the Navy Medical Department to more readily support contingency operations.

1. Day Significant Items List

The D-Day Significant Items List, or D-Day List, is an "identification of the medical items that are essential for the wartime medical mission of the military services" (D-Day List, August 1994). While this list does not include quantities required for contingency operations, it does include a list of medications which satisfy AMAL requirements. The D-Day list is useful to the Prime Vendors because it identifies those items which will be required during contingency operations.

Another function of the D-Day list is that it provides identification of "military unique" items, i.e., items which are used specifically in military medical practice because of the dosage form, package size or delivery system. An example of a military unique item is an atropine auto-injector which is self-administered by troops who are exposed to certain chemical or biological agents. The medication, atropine, is not a military unique item but in combination with this delivery system, this item is considered military unique. The delivery system allows a victim of a chemical or biological

attack to self-administer this medication by striking the cylinder, which contains the medication, on his or her thigh. This causes a needle to spring from the cylinder and inject the dosage of atropine automatically into the victim. Military unique items are items which are not normally used in routine medical practice. Due to this fact, it would be difficult for Prime Vendors to rotate these items through normal peacetime usage.

While inventories previously maintained in DLA depot warehouses are decreasing, the depot system is not being eliminated completely. Prior to the Prime Vendor Program, the depots maintained approximately 2600 different pharmaceutical line-items. It is expected that eventually the number of different line-items will be reduced to approximately 200. The process of reducing these line-items is currently in progress with more items being eliminated as inventories are depleted.

Prime Vendors will be unable to rotate the stock of military unique items since these items are usually only used during wartime scenarios. Therefore, military unique items should be maintained as part of the DLA depot system while Prime Vendors can be utilized to provide materials for contingency operation which are not considered military unique.

2. Shelf-Life Extension Program

The Shelf-Life Extension Program (SLEP) is a DoD program which is used by all of the military services. The purpose of this program is to avoid replacement costs for materials which have "expired" yet still may have a useful shelf-life. The method used to receive an extension is straight forward. The military service which owns the expired or soon to expire material must request a shelf-life extension from the Food and Drug Administration (FDA). The service also incurs the costs of this process. The FDA then takes a representative sample

of the item(s) to be tested by the FDA or an FDA-approved laboratory. This sample is tested to assure the medication is still potent and has useful shelf-life remaining. If after this testing, the FDA decides that the medication meets their standard for a shelf-life extension, they will grant an extension of the original manufacturer's expiration date. The extension may be for six months, a year or longer based on the FDA's statistical analysis of the potential of the medication to maintain the original medicinal properties over that time period.

The Shelf-Life Extension Program is utilized to assure medical supply inventories can be used for their entire shelf-life. In support of contingency operations, the SLEP is relied upon to prolong the useful shelf-life of items held in DLA medical inventories.

SLEP was frequently used prior to the Prime Vendor Program for materials maintained in DLA depots as well as for Prepositioned War Reserve (PWR) supplies. Many supplies, which may be extended prior to their usage or expiration, are still maintained throughout the Department of Defense's medical inventories. By using these extended supplies through their useful shelf-life, Prime Vendors can be utilized to obtain other medical supplies which are needed for contingency operations.

Since the initiation of the Prime Vendor Program, there has been less reliance on the SLEP. Eventually, the SLEP should only be used for the medical inventory which remain in DLA depots, specifically military unique items. This phase-out would be possible since responsibility for supplying non-military unique items is transferred from DLA depots to the Prime Vendors.

3. Industrial Preparedness Plan

The Industrial Preparedness Plan (IPP) is a cooperative effort between military medical planners and medical manufacturers. The plan examines the manufacturing capabilities of the medical industry to determine if the industrial capacity is able to meet the medical readiness requirements.

In a major regional conflict, medical units from all of the military services will be called upon to support the operation. In the Prime Vendor example from Operation Uphold Democracy, only one major medical unit was activated to support that operation, the USNS COMFORT (T-AH 20). While the deployment of the COMFORT showed the potential of using a Prime Vendor to support a contingency operation, an important factor was missing during that operation. That factor is the possibility of many medical units deploying for a large operation, an MRC. All of these units will have to obtain their consumable medical supplies from Prime Vendors. During ODS, the Navy deployed Hospital Ships and Fleet Hospitals, the Marine Corps utilized medical battalions and other Navy medical assets, the Army deployed Field Hospitals and the Air Force deployed Air Transportable Hospitals (ATH). All of these medical units deployed during the same time frame. In the event of an even larger deployment, Prime Vendors could be called upon to support a multitude of these units. It is the purpose of the IPP, based on the medical requirements of these units, to determine if the medical manufacturers are able to produce the materials needed for these deploying units.

By including the Prime Vendors in the planning process, both the Navy and the Prime Vendors would be able to understand the strengths and weaknesses of each another. With this type of partnership, both sides would be better able to assure successful resolutions to these problems.

E. PROPOSED CHANGES TO THE AMAL SYSTEM

The AMAL system problems described in Chapter III require solutions in order to assure a smooth transition from a peacetime military medical environment to providing the required medical support for contingency operations. This thesis proposes changes to the AMAL configuration based on mission, geography and climate as well as reductions in the time-lag for AMAL change request forms.

1. AMAL Mission Configuration

As stated in Chapter III, the current AMAL system is designed, solely, around a combat intensive contingency operation which is characterized by a trauma/surgery patient load. The primary mission of Navy Medicine is still in support of the Fleet during normal and contingency operations (particularly combat/conflict scenarios). The AMAL is designed around this primary mission, therefore this focus should be maintained. However, supporting the primary mission does not preclude designing another AMAL or a complementary AMAL to support other secondary missions.

Specifically, complementary AMALs should be configured to support humanitarian/disaster relief missions and peacekeeping missions. These additional AMALs should be designed around the specific patient population which are expected during these missions.

2. AMAL Flexibility for Geography/Climate

Since U.S. forces operate around the world, AMALs should be flexibly designed to allow for differences in geography and climate. Disease and Non-Battle Injuries (DNBI) are often directly related to the location, terrain or climate where an operations takes place. By building flexibility directly into the AMAL, the unit "on the ground" has the latitude to order the operation-specific items needed to treat or prevent DNBI.

The primary AMAL should be the combat casualty specific list of medical requirements similar to the "one AMAL" concept used now for all contingency operations. In addition to this

list there should be secondary or complementary AMALs for peacekeeping and relief missions. These secondary AMALs could be used in addition to or independent of the primary AMAL, based on the type and scope of the operation. The third level of the AMAL system should be a list of medications which may be required based on the geography or climate of the theater of operations. A rather simple example of this type of item is insect repellent. In a winter or Arctic operation this item would be unnecessary but in a tropical or jungle operation insect repellent could be a life-saving necessity. Finally, in order to help Prime Vendors plan for contingency operations, these lists should be conveyed to the Prime Vendors.

3. Response Time For AMAL Changes

As stated in Chapter III, the goal of the ACRs and biennial AMAL reviews is that the standard of care practiced by deployed units should not be dramatically different than that practiced at CONUS MTFs. This goal can only be realized when the method of updating AMALs involves a timely, responsive review of ACRs. This method of review will allow the AMALs to evolve into living documents which can keep pace with the ever changing practice of medicine.

F. PRIME VENDOR PERSPECTIVE

While this thesis is written from a Navy perspective, it is useful to also view these issues through the eyes of the Prime Vendors. The McKesson Drug Company, which is the Prime Vendor for the National Capitol, San Diego, and San Francisco regions, was contacted for comment. Mr. Phillip Scott, Vice-President for Professional and Business Relations at McKesson in San Francisco California provided the pharmaceutical wholesale industry's perspective during a telephone interview with the author.

While speaking only for his company, Mr. Scott stated that he believed his opinions were shared by other Prime

Vendors from various geographic regions. Mr. Scott felt that his company could adequately support contingency operations because of their ability to draw on the company's assets across the nation. This claim is supported by tests conducted by the Naval Medical Logistics Command. In these tests, a contingency scenario is simulated in order to determine the supply system which can best support the operation. The results of these tests show that the Prime Vendor option consistently outperforms the other means of medical supply including the DLA depot system, open purchase and direct procurement. (Wade, September 1994)

Mr. Scott also stated, that since most pharmaceutical manufacturers operate at a fraction of their potential capacity, these manufacturers have the ability to increase production to meet some additional demand. Mr. Scott added that if the military required a larger quantity of an item than McKesson had at it's disposal, the company had agreements with other wholesalers as well as manufacturers to ship products directly to deploying units with just the paperwork being routed through McKesson.

Finally, Mr. Scott felt that the proposal of informing Prime Vendors of operational requirements, such as AMALs, would be a useful industry planning tool. This information could facilitate the ability of Prime Vendors to support contingency operations, especially the surge phase of the operations. (Scott, November 1994)

G. PREVIEW OF NEXT CHAPTER

Chapter V contains the conclusions and recommendations of this thesis. The primary research question and secondary questions proposed in Chapter I are answered in Chapter V.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSION

The central conclusion of this thesis is that the medical inventory reductions caused by the Prime Vendor Program have not and will not negatively affect Navy Medicine's ability to support the surge and sustainment of contingency operations. On the contrary, the Prime Vendor Program is a more responsive system characterized by faster turn around times, higher fill rates, less waste and better customer support than the Defense Logistics Agency's depot supply system. The Prime Vendors should be able to support the pharmaceutical requirements for contingency operations.

However, while the Prime Vendor Program may be an improvement over the DLA depot system, there is still room for improvements in the process (as recommended below).

Another conclusion of this thesis is that the AMAL system, which was so useful during the Cold War, needs to be updated to better support the evolving military missions in the post-Cold War era.

B. NAVY MEDICINE'S STRATEGY

The strategy Navy Medicine should use to assure that Navy medical readiness is maintained is to treat the Prime Vendors as partners in the successful completion of the medical support aspects of contingency operations. By including the Prime Vendors in the planning process for these operations, the Navy increases the probability that the Prime Vendors will understand the operational requirements. Consequently, the probability that the Prime Vendors will be able to meet these requirements would be increased.

C. RECOMMENDATIONS

In order to improve Navy Medicine's medical support mission for contingency operations the following recommendations are proposed.

First, the Navy Medical Department should form a partnership with the various Prime Vendors during the planning for contingency operations. This proposition serves two important purposes. It gives the Prime Vendors the requirements information needed to properly budget and plan for the pharmaceutical requirements of various contingency operations. It also helps Navy medical planners understand the Prime Vendors' capabilities. This fact allows the planners to determine which items the Prime Vendor should be able to provide. By knowing which items the Prime Vendors can provide, Navy medical planners can make arrangements to obtain the other items which are unavailable through the Prime Vendor Program. These items should be maintained as contingency safety stock in the DLA depot system.

Second, the Navy should inform the Prime Vendors of the pharmaceutical requirements for contingency operations. Specifically, Prime Vendors should be notified of the pharmaceutical line-items required as well as the quantities required of each of these line-items. This information assures that these Prime Vendors will know what supplies are required. It also increases the probability that they will be able to fulfill those requirements.

Third, an agreement to rotate contingency supplies between the Department of Defense and the Prime Vendors should be negotiated. By rotating contingency supplies through normal peacetime usage channels, the Prime Vendors would be able to minimize waste due to expiration of supplies. This would also provide the Department of Defense with assurances that the Prime Vendors will have the required inventory to support contingency operations, especially the supplies required for the surge of an operation.

Fourth, DoD and Navy planners should utilize other tools which are available to them, such as the Industrial Preparedness Plan (IPP), Shelf-Life Extension Program (SLEP) and D-Day Significant Items List. These tools can help planners determine the Prime Vendors' ability to meet operational requirements and which items should be procured through the Prime Vendors. Also, these tools can delineate which items are considered military unique and therefore should be maintained as safety stock in the DLA depot system.

The final recommendation of this thesis is to correct the deficiencies in the AMAL system. In the post-Cold War era, the defined missions are evolving and being redefined. In this type of environment, an AMAL must be flexible enough to evolve to match these changing missions. The primary AMAL should remain the combat casualty specific list currently in use. However, additional AMALs should be established to support operations such as humanitarian/disaster relief efforts and peacekeeping missions. The final change to the AMAL system should be to have a third tier with area-of-operation specific items based on geographic location, terrain and/or climate.

By incorporating these recommendations, Navy Medicine would be able to continue to improve the medical support mission for Fleet contingency operations.

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